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Sequence Listing was accepted.

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Reviewer: Durreshwar Anjum

Timestamp: [year=2011; month=7; day=22; hr=10; min=37; sec=21; ms=407;]

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Application No: 10576757

Version No: 6.0

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Input Set:

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Error code

Error Description

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SEQUENCE LISTING

<110> Winter Sederoff, Heike
Huber, Steven C
Larabell, Carolyn A

<120> SYNTHETIC PEPTIDES THAT CAUSE F-ACTIN BUNDLING AND BLOCK ACTIN
DEPOLYMERIZATION

<130> JIB-1571

<140> 10576757

<141> 2011-07-15

<150> US 60/513,275

<151> 2003-10-20

<160> 30

<170> PatentIn version 3.5

<210> 1

<211> 15

<212> PRT

<213> Artificial

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<223> synthetic consensus active Zea mays Sucrose Synthase (SuSy)
peptide

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<223> synthetic peptide derived from Zea mays SuSyl protein 367-381

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<223> synthetic peptide derived from Zea mays SuSy3 protein

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<223> synthetic peptide derived from Drosophila melanogaster Actin 2
protein and Homo sapiens beta and gamma Actin proteins

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Glu His Gly Ile Val Thr Asn Trp Asp Asp Met Glu Lys Ile Trp
1 5 10 15

<210> 6

<211> 15

<212> PRT

<213> Artificial

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<223> synthetic peptide derived from Drosophila melanogaster Actin 3,
5, and 6 proteins and Homo sapiens alpha Actin protein

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Glu His Gly Ile Ile Thr Asn Trp Asp Asp Met Glu Lys Ile Trp
1 5 10 15

<210> 7

<211> 15

<212> PRT

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<223> synthetic peptide derived from Drosophila melanogaster ARP1

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<212> PRT

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<223> synthetic peptide derived from Drosophila melanogaster ARP2

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Glu Asn Gly Val Val Arg Asn Trp Asp Asp Met Cys His Val Trp
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<212> PRT

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<223> synthetic SS1 inactive control peptide

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Gly Asp Arg Val Leu Ser Arg Leu His Ser Val Arg Glu Arg Ile Gly
1 5 10 15

Lys

<210> 10

<211> 18

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<213> Artificial

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<223> SS2 active peptide based on Zea mays SuSy 377-392

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1 5 10 15

Lys Lys

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Ile Leu Arg Val Pro Phe Arg Thr Glu Asn Gly Ile Val Arg Lys
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<210> 12
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<400> 12

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1 5 10 15

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<223> replaced Tryptophan residue with Alanines

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<210> 14

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1 5

<210> 15
<211> 19
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Ser Lys Lys

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peptide

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1 5

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<223> SP3 inactive synthetic peptide

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<222> (10)..(10)

<223> X=noroleucine

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<223> synthetic peptide of Drosophila melanogaster Actin protein
consensus sequence

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1 5 10 15

His Thr Phe Tyr

20

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<212> PRT

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<223> synthetic peptide derived from Homo sapiens ARP1 protein

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<210> 21

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<212> PRT

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<223> Core minimum block of SS12 sequence required for less active
synthetic peptide

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Ser Arg Phe Glu Val Trp
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<210> 23

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<223> SS synthetic peptide B

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Trp Ile Ser Arg Phe Glu Val Trp Pro Tyr Leu Lys Lys
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<210> 24

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<223> SS synthetic peptide C

<400> 24

Glu Asn Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp Pro
1 5 10 15

Tyr Leu Lys Lys
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<210> 25

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<223> X=His or Asn

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<222> (5)..(5)

<223> X= Val or Leu or Ile

<220>

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<222> (6)..(6)

<223> X= Arg or Thr or Lys

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<222> (7)..(7)

<223> X= Lys, Asn, Asp

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<222> (9)..(9)

<223> X= Ile or Asp or Asn

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<223> X= Ser or Asp

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Glu Xaa Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Trp Xaa
1 5 10 15

Xaa Xaa Xaa Xaa
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<210> 26
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<223> Motif for a synthetic peptide which causes actin bundling and
inhibits actin depolymerization

<220>

<221> VARIANT

<222> (2)..(2)

<223> X = any amino acid

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<221> VARIANT

<222> (4)..(4)

<223> X = Ile or Val

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<221> VARIANT

<222> (5)..(7)

<223> X = any amino acid

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<222> (9)..(14)

<223> X = any amino acid

<400> 26

Glu Xaa Gly Xaa Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Trp
1 5 10 15

<210> 27

<211> 15

<212> PRT

<213> Artificial sequence

<220>

<223> Motif for a synthetic peptide that causes actin bundling and
inhibits actin depolymerization

<220>

<221> VARIANT

<222> (2)..(2)

<223> X= Lys, Arg, or His

<220>

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<222> (5)..(5)

<223> X= Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

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<222> (6)..(6)

<223> X= Lys, Arg, or His

<220>

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<223> X= any amino acid

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<222> (14)..(14)
<223> X= Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

<400> 27

Glu Xaa Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Trp
1 5 10 15

<210> 28
<211> 16
<212> PRT
<213> Artificial Sequence

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<223> Formula (I) for active synthetic peptides

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<222> (3)..(3)
<223> X = Ile, Val, or Leu

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<223> X = Arg, Lys, Asn, or Thr

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<222> (5)..(5)
<223> X = Arg, Lys, Asn, or Asp

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<222> (7)..(7)
<223> X = Ile, Asp, Asn, or Glu

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<221> VARIANT
<222> (8)..(8)
<223> X = Ser, or Asp

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<222> (9)..(9)
<223> X = Arg, Met, or Ala

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<222> (10)..(10)
<223> X = Phe, or Glu

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<222> (11)..(11)
<223> X =Asp, Glu, Lys, Arg, or His

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<222> (14)..(14)
<223> X =Pro, or His

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<222> (15)..(15)
<223> X =Tyr, or His

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<222> (16)..(16)
<223> X =Leu, or Thr

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Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Trp Xaa Xaa Xaa
1 5 10 15

<210> 29
<211> 13
<212> PRT
<213> Artificial Sequence

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<223> Formula (II) for synthetic active peptides

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<223> X = Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

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<222> (4)..(4)
<223> X = Lys, Arg, or His

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<221> VARIANT
<222> (5)..(5)
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<222> (7)..(11)
<223> X = any amino acid

<220>
<221> VARIANT
<222> (12)..(12)
<223> X = Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

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<213> Artificial sequence

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<223> SS2 and SS12 subsequence necessary for peptide activity

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